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OF
CHESTER-LE-STREET.

REPORT

OF THE

Medical Officer of Health

FOR THE YEAR

1945.

JOHN DOWNIE TRAIL, M.B., Ch.B. (Aberdeen)
D.P.H. (Aberdeen).

CHESTER-LE-STREET:
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1946.

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Urban Council Chambers,
Chester-le-Street,
1946.

To the Chairman and Members of the Chester-le-Street Urban District Council.

Ladies and Gentlemen,

I have the honour to submit my eighth Annual Report on the Health, Vital Statistics, and Sanitary Circumstances of your area for the year 1945, which is prepared in accordance with the lines laid down in Circular 28/46 of the Ministry of Health.

Previous restrictions which were imposed on grounds of National Security relating to the publication of population figures etc., have now been removed.

Increasing emphasis is now being made on the prevention of disease as well as its actual treatment, and special reference will be found in this connection with regard to Diphtheria Immunisation, Anti-Scabies Measures, and the great contribution which the Sulphonamides, and latterly Penicillin are playing in the saving of life and the prevention of disease.

Especial reference is made in the section on Tuberculosis on the urgent need for national research on Tuberculosis and for the widespread pasteurization of milk in the prevention of bovine Tuberculosis. Tuberculosis is a problem of such magnitude that it requires the utmost consideration, sympathy, and concerted attention of all concerned in the welfare of the community, together with a widespread campaign, with all the means at our disposal, to combat the ignorance, prejudice and appalling apathy which still exists with regard to this, perhaps the greatest medico-social problem known.

As the Council are aware, activities with regard to Civil Defence have now ceased.

Acknowledgment is accorded to all Members of the Council for their encouragement and support, to the Staff for its loyal co-operation and in particular to Mr. George C. Banks, Sanitary and Housing Inspector. His assistance in the preparation of this Report deserves especial reference, and the section dealing with the Sanitary Circumstances of the area has been, as in previous years, almost entirely his own production.

I am, Mr. Chairman and Members,

Your obedient Servant,

JOHN DOWNIE TRAIL,

Medical Officer of Health.

PUBLIC HEALTH OFFICERS OF THE AUTHORITY.

Medical Officer of Health—

JOHN DOWNIE TRAIL, M.B., Ch.B. (Abd.),
D.P.H. (Abd.).

The Medical Officer holds the combined appointments of District Tuberculosis Medical Officer for the Durham County Council, and that of part-time Medical Officer of Health for the Chester-le-Street Urban District Council.

Sanitary Inspector—

GEORGE C. BANKS, M.R.S.I., DIPLOMA INST.
PUBLIC HEALTH AND HYGIENE.

The Sanitary Inspector is a whole-time officer, and holds the Sanitary Inspector's Certificate, the Meat and other Foods Inspector's Certificate, and the Certificate in Sanitary Science as applied to Public Works and Buildings of the Royal Sanitary Institute. The Diploma in Cattle, Meat and Food Inspection of Liverpool University and also the Diploma of the Institute of Public Health and Hygiene.

Housing and Shops Inspector—

GEORGE C. BANKS, M.R.S.I., DIPLOMA INST.
PUBLIC HEALTH AND HYGIENE.

The Ministry of Health contributes half the salaries of the Medical Officer of Health and the Sanitary Inspector.

HIGHWAYS AND SANITARY (PUBLIC HEALTH) COMMITTEE, 1945.

Coun. C. Patterson (Chairman)
,, R. Moist
,, N. Holyoake
,, T. Greener
,, S. Usher, J.P.
,, E. Reeve, J.P.
,, L. Usher, J.P.
,, J. Miller
,, J. McGorrigan
,, J. Willis.
,, J. Hutchinson
,, J. C. Gibbs
,, G. A. Gilchrist, J.P.
,, J. G. Atkinson
,, J. T. Carter
,, Mrs. E. Brighton
,, Mrs. M. A. Thompson

STATISTICS AND LOCAL CONDITIONS OF THE AREA.

The district has an area of 2,647 acres.

The number of inhabited houses in 1945 was 4,~~881~~ 911.

The actual product of a penny rate for the year ending 31st March, 1945, was £285 16s. 1.38d., and for the same period the rateable value was £76,050.

The number of inhabited houses was as follows

Terrace Houses	2455
Detached Houses	102
Semi-Detached Houses	848
Farm Houses and Cottages	15
Houses and Shops combined	56
Council Houses	~~1405~~ 1435
Total	~~4881~~ 4911

EXTRACTS FROM VITAL STATISTICS.

		Total	Male	Female
Live Births:	Legitimate	291	152	139
	Illegitimate ...	26	13	13
Birth Rate per 1,000 of the estimated resident population				18.7
Still Births				15
Rate per 1,000 (live and still births)				19.6
Deaths		223	110	113
Death Rate per 1,000 of the estimated resident population				13.1

DEATHS FROM PUERPERAL CAUSES.

Puerperal Sepsis	1
Other Puerperal Causes	Nil
Total	1
Rate per 1,000 (live and still) births	3.01

DEATH RATE OF INFANTS UNDER ONE YEAR OF AGE.

All Infants per 1,000 live births	50.5
Legitimate Infants per 1,000 legitimate births	51.5
Illegitimate Infants per 1,000 illegitimate live births ...	3.8
Deaths from Measles (all ages)	Nil
Deaths from Whooping Cough (all ages)	Nil
Deaths from Diarrhoea (under two years)	Nil

BIRTH RATE.

This shows a decrease from last year, being 18.7 compared with 20.2 per 1,000 of the estimated population in 1944. The rate for England and Wales for the same period was 16.1.

DEATH RATE.

The Death Rate for 1945 was 13.1 per 1,000 of the estimated population.

INFANTILE MORTALITY.

There were 16 deaths recorded of infants under 1 year of age with an Infantile Mortality Rate of 50.5. The corresponding rate for 1944 was 76.2. The Infantile Mortality Rate in 1945 for England and Wales was 46.

Infantile Mortality has been greatly reduced during the present century and has in fact been more than halved during this period. Some deaths are inevitable in infants under 12 months of age however good their surroundings and however carefully and intelligently maternal care is exercised. Making due allowances for such causes as Prematurity, Congenital Malformations and other defects, or other possible ailments of infancy, an annual death rate of 25 per 1,000 live births amongst infants is unavoidable. It follows that anything above this is preventable although the necessary means to prevent it are so difficult to apply, that even in the best districts, loss of infant life is in excess of this standard.

With regard to Infantile Mortality, the beneficial effects of breast feeding as opposed to artificial feeding, are shown by a study of figures relating to 20,000 infants attending a Welfare Centre in Chicago where the percentage of deaths in the children wholly breast fed was 0.15% as opposed to 8.4% in those who were wholly artificially fed.

The local Welfare Centre is well attended, and all mothers, especially expectant mothers, should avail themselves fully of all the help and advice which can be obtained at the Welfare Centre.

INFANTILE MORTALITY PER 1,000 LIVE BIRTHS.

1936	82.4
1937	59.9
1938	81.2
1939	96.1
1940	96.0
1941	71.1
1942	31.4
1943	68.9
1944	76.2
1945	50.5

DEATHS FROM PUERPERAL PYREXIA AND OTHER PUERPERAL CAUSES.

During the year under review 1 death occurred from Puerperal Sepsis. The sulphonamide group of drugs, and latterly, the use of Penicillin in appropriate cases will no doubt continue to exercise a favourable effect in the prevention and treatment of those abnormal conditions associated with child birth. The death rate per 1,000 (live and still) births equals 3.01.

COMPARATIVE TABLE OF VITAL STATISTICS DURING THE LAST 5 YEARS, 1941-45.

Year.	Birth Rate.	Death Rate.	Infantile Mortality per 1,000 live births.
1941	16.6	13.9	71.1
1942	17.7	11.5	31.4
1943	19.4	11.1	68.9
1944	20.2	18.2	76.2
1945	18.7	13.1	50.5

CAUSES OF DEATH IN 1945.

	Males	Females	Total
All Causes	110	113	223
Influenza	3	4	7
Typhoid & Paratyphoid	—	—	—
Cerebro-Spinal Fever	—	—	—
Scarlet Fever	—	—	—
Whooping Cough	—	—	—
Diphtheria	—	—	—
Tuberculosis of respiratory system	2	5	7
Other forms of Tuberculosis ...	0	1	1
Syphilitic disease	—	—	—
Measles	—	—	—
Acute-Polio-myelitis & polio encephalitis	—	—	—
Acute Inf. encephalitis	1	0	1
Cancer all forms	15	20	35
Diabetes	0	1	1
Intra-cranial vascular lesions ...	5	11	16
Heart Disease	38	33	71
Other circulatory disorders ...	4	4	8
Bronchitis	6	3	9
Pneumonia	4	5	9
Other respiratory diseases ...	1	0	1
Ulcer of stomach or duodenum ...	1	0	1
Diarrhoea (under 2 years)	—	—	—
Other digestive disorders ...	1	3	4
Nephritis	4	2	6
Puerperal & post-abortional causes	0	1	1
Other maternal causes	—	—	—
Premature Births	2	2	4
Congenital Malformations & birth injuries	4	1	5
Suicide	1	0	1
Road traffic accidents	2	2	4
Other violent causes	5	1	6
All other causes	11	14	25

Heart Disease.

In the causes of death for 1945, Heart Disease continues to play a major part. The number of deaths recorded were 71 as compared with 54 in 1944. It is conceivable that the abnormal conditions appertaining during the year, the strain after long years of war, and the tiring effects of long standing in queues, etc., may have exercised a deleterious effect on aged people and been responsible for the increase in the number of deaths recorded during the year.

Cancer.

35 deaths from all forms of Cancer were recorded in 1945 compared with 21 deaths in 1944.

In connection with the treatment of Cancer, surgery naturally remains the only method of treatment in some forms, and shares in the treatment of others. Radiotherapy is no longer regarded merely as a palliative treatment in advanced cases or a doubtfully helpful supplement following surgery, but rather as an equal partner.

The war-time years have definitely retarded local authorities in pushing forward with schemes approved in connecion with the Cancer Act. There is definitely a need for specially equipped centres for the treatment of Cancer by radiotherapy where accurate records can be maintained and the value of the existing methods of treatment can be more easily assessed, and the effects of new methods can be more quickly determined where large numbers of cases will be attending for treatment.

With regard to treatment of Cancer of the Prostate by the use of Stilboestrol, there is a general agreement that some 2/3 of patients submitted for treatment respond in some measure and that benefit is shown by the diminution or disappearance of painful symptoms associated with the primary disease or with secondary metastases, and by an increase in weight and well-being. In view of the largely misquoted review by Professor Dodds on this field of Cancer research, it is important to record that he stated, " No single member of the workers in this field of Cancer research has ever claimed a cure." It is true that clinical regression and a stationary condition of well-being has been observed for a period of 2 years, but nothing under 5 years can be considered as adequate evidence, even of permanent regression, when dealing with Carcinoma of the Prostate. In general one can conclude that it has been proved possible to mitigate the symptoms and prolong life and well-being in patients with Carcinoma of the Prostate, but as yet " cure " cannot be claimed.

More recently a series of reports have appeared claiming good results from Stilboestrol in Breast Cancer, but it is difficult to conceive the rationale of this. The good results mentioned have only occurred in isolated cases. In a larger series of cases of malignant disease of the Breast, treated at the Royal Cancer Hospital with Stilboestrol, a proportion showed a significant although temporary retardation or even partial regression of the growth of the tumour. No evidence was obtained to suggest that the drug will prevent the development of secondary deposits and the initial effects of the treatment passed off comparatively rapidly. We therefore can see that although some temporary amelioration can be expected in a fair proportion of cases, the care or even the control of Cancer of the Breast by hormone therapy, has not yet been achieved. Extracts of the Parathyroid glands and the Suprarenal Cortex have also been advocated, but up-to-date their claims have not been vindicated,

BIRTH-RATE, DEATH-RATE, AND ANALYSIS OF MORTALITY DURING THE YEAR 1945.

	Rate per 1,000 Total Population.		Annual Death Rate per 1,000 Population.								Rate per 1,000 Live Births.	
	Live Births	Still-births	All Causes	Typhoid & ParaTyphoid Fevers	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Smallpox	Diarrhœa and Enteritis (under Two years)	Total Deaths under One year
England and Wales	16·1	0·46	11·4	0·00	0·02	0·00	0·02	0·02	0·08	0·00	5·6	46
126 County Boroughs and Great Towns, including London ...	19·1	0·58	13·5	0 00	0.02	0·00	0·02	0·02	0·07	0·00	7·8	54
148 smaller Towns Estimated Resident Populations, 25000 to 50,000 at Census 1931	19·2	0·53	12·3	0·00	0·02	0·00	0·01	0·02	0·07	0·00	4·5	43
London	15·7	0 04	13·8	0·00	0·01	0·00	0 02	0·01	0 07	0·00	7·6	53
Chester-le-Street	18·7	0·84	13·1	0·00	0·00	0.00	0·00	0·00	0·41	0·00	0·0	50

	No. 140 abortion with Sepsis.	No. 141 abortion without Sepsis.	No. 147 Puerperal Infections.	Nos. 142—6 148—150 Others.	Total
The Maternal Mortality rates for England and Wales are as follows.	0.25	0.08	0.24	1.22	1.79
Abortion : Mortality per million women aged 15—45, England & Wales.	18	6			24

Notifications	England and Wales	126 County Boroughs and Great Towns including London	148 smaller Towns Resident Population 25-50,000 1931 Census	London Administrative County
Puerperal Fever Puerperal Pyrexia	9·93	12·65	8·81	3·60
Including Puerperal Fever ...	...	...	...	15·87

NURSING IN THE HOME.

The conditions under this heading are much the same. Chester-le-Street Nursing Association provides two Nurses for general district work, and there is also a Nurse both at Chester Moor and Pelton Fell also engaged in these duties.

(a) **Infectious Diseases.**—As the great majority of infectious disease cases are removed to the Isolation Hospital (which is situate in the Urban District) no special arrangement for this purpose is in operation.

(b) **Midwives.**—There are 5 certified midwives practising in the Area. These are subject to the supervision of the Inspector of Midwives of the Durham County Council.

LABORATORY FACILITIES FOR THE EXAMINATION OF PATHOLOGICAL AND BACTERIOLOGICAL SPECIMENS.

In September 1944 the Durham County Council intimated that under section 91 of the Local Government Act, 1933, a joint committee of the Newcastle-on-Tyne, Gateshead and Tynemouth Corporations, together with the Durham County Council had been formed to exercise functions in connection with the provision and maintenance of laboratory facilities in these districts; the joint committee thus formed to maintain and manage certain laboratories, and subject to the concurrence of the respective borough, urban and rural district councils interested, the County Council agreed to assume the responsibility of fees in respect of investigations connected with the examination of pathological and bacteriological specimens.

The following are particulars of the examinations undertaken in 1945 at the Joint Committees Central Public Health Laboratory, The Medical School, Kings College, Newcastle-on-Tyne:—

Disease.	Positive.	Negative.
Diphtheria	57	86
Tuberculosis	14	68
Enteric Group (& Paratyphoid)	—	3
Dysentery	—	9
Miscellaneous	2	1

The above figures do not relate to returns of specimens taken by the Medical Officer of the Chester-le-Street Isolation Hospital, except in so far as they relate to cases normally resident in the Chester-le-Street Urban Area.

DIPHTHERIA PROPHYLAXIS.

Intensive efforts continue with regard to diphtheria immunisation, with special emphasis on the maintenance of a high level of immunisations in children under 5 years of age, i.e. the age groups in which there is the highest mortality of disease. Weekly clinics are undertaken for this purpose at the Welfare Centre, and although special emphasis is placed on immunisation of children under 5 years, a fair number of children of school age also attended for initial immunisation and re-immunisation. Constant Publicity and Propaganda is carried out by the Health Department with regard to immunisation and plays an increasingly important part in the fight against the disease. Recently a further intensive campaign has been carried out in the local schools, but the results accruing have been rather disappointing.

The importance of immunisation as a saver of child life cannot be sufficiently stressed, and every death which occurs of a child suffering from diphtheria is a tragedy which could have been avoided. Although the use of Diphtheria Antitoxin for several decades had cleared the air of massive deaths, it became recognised that something more than this was needed. The merits of active immunisation, proclaimed at first by only a few enthusiasts have, one trusts by now, convinced both the public, and the profession, as at last the number of deaths from diphtheria is falling as the degree of immunisation reaches a sufficiently high standard to make its mark. It is important that there should be no slackening in our efforts in this connection since any letting up will undoubtedly be followed by a dangerous retreat.

At the end of 1943 it could be assumed that about half the child population had undergone a course of inoculations and in that same year the estimated rate of dying from diphtheria was 25 times as great among the non-immunised as among the immunised. A comparison of figures of death rates from diphtheria of each half of 1943 with the corresponding half of 1942 showed that while the deaths in the age groups between 1-15 have been reduced by 14% to 50%, they have risen under the age of 1 year and over the age of 15 years. In other words the reduction in the number of deaths is occurring in those groups where immunisation is most completely practised. From the community point of view, immunisation carried out after 5 years of age does not reap the same dividends as immunisation between the age of 9-12 months, and if a community is to remain well immunised there must be an annual increment of new immunisations roughly equivalent to the number of births. J. A. Scott, Medical Officer of Health for one of the London boroughs has shown that for his district, the risk of an immunised child catching diphtheria is 12 times less than that of a non-immunised child, while the risk of an immunised child dying is 100 times less. These figures are paralleled in every campaign, but renewed efforts will constantly be required for further improvements in these statistics, During 1945, 613,329 children were immunised against Diphtheria under local authority schemes, an increase of 52,015 on the total for 1944. The total number of children immunised since the national campaign was launched 5 years ago was now 5,979,284. During 1945 25,223 cases were notified (18,596 after correction) with 720 deaths, these are the lowest figures ever recorded. It should be noted that in every year since the campaign got under way, a new low record has been established, deaths for 1945 were only 25% of the pre-war average, and the total number of cases notified less than 50%. This decline is in marked contrast to the increase in some other European countries where they have experienced the worst diphtheria epidemics for 50 years. The aim of the present summer campaign is to secure the immunisation of 550,000 babies before the winter epidemic season begins, since it is believed that if the great majority of babies born each year could be protected just before their first birthday, diphtheria could be eliminated in this country as an epidemic disease. Mass immunisation is now practised in all the big cities of Canada and the U.S.A. and as illustrating this, deaths from diphtheria per 100,000 children in Toronto, fell from 15.7 a year in 1926-27 to 0.3 in 1940-44. In New York, where diphtheria deaths averaged 1,290 annually from 1910-19 the 1940 figure was 10 and the 1944 figure 6.

It is now the unanimous opinion of those engaged in inoculation work that if immunity is to be maintained at an effective high level, a single refresher dose, 3-5 years after the primary course of injections is essential. As an example, in one investigation, 3,000 children were examined from 2-6 years after successful immunisation and it was found that after 2 years in about 4%, the immunity had waned, and that this figure had risen to 18% after 6 years.

The recent statement of Maj. Gen. Brock Chisholm, Canadian Deputy Health Minister, that any danger from diphtheria is " from ignorance and superstition which prevents parents from giving children the protection of immunisation," has drawn support from prominent officials of the Health League of Canada. Dr. Nelles Silverthorne said the truth of Gen. Chisholm's statement was borne out by the fact that of seven children who died from a recent diphtheria outbreak in Ottawa, not one had been immunised.

" This tragic evidence proves the value of immunisation," Dr. Silverthorne said. " It is beyond comprehension why parents neglect to have their children given harmless protection when such protection is so easily obtainable." " It is too bad that it takes an epidemic to make people realise the truth," he said in commenting on the fact that attendances at Ottawa's clinic for injections had increased by more than 300% since the start of the outbreak.

In so far as local statistics are concerned, the immunisation of infants and children (0—4 age group) has now, as far as can be ascertained from records available, almost reached saturation point.

In the 5—14 age group it is estimated that 2,332 children have completed a course of initial immunisation since the local campaign commenced in 1941. The estimated child population in this age group is 2,520.

It is still a matter for great satisfaction that no deaths from diphtheria have been recorded in this area during the year under review.

TREATMENT OF SCABIES.

The treatment of scabies continues on the same lines as in the previous report, separate clinics for the sexes are held on three days per week. The nurse-in-charge is directly responsible for treatment, domiciliary visiting, and the following-up of cases to the home so that the disease can be treated on a family basis. The whole scheme is under the general supervision of the Medical Officer of Health. Treatment as before is mainly carried out by 25% Benzyl Benzoate emulsion, and cases complicated by septic infection and impetigo have been treated as before by the sulphonamide group of drugs with success.

A soap is now in production for the treatment of scabies, containing Tetmosol (Tetra-ethyl thiurum monosulphide) and it is probable that, although soap impregnated with Tetmosol is unlikely to supersede the standard methods already employed which result in more than 90% cures, there is some justification for the belief that the general use of this soap in any infested community would reduce the incidence of scabies by sterilizing a proportion of the existing cases and by destroying the infection in freshly infected persons. The generalised use of this soap however will only be possible if it is found that a high incidence of dermatitis does not follow its prolonged use. The use of D.D.T. both as a preventive and curative agent in scabies is under investigation but from preliminary reports it would appear that this compound is less successful in the control of scabies than in other types of infection.

A careful watch is maintained for head infestation, but during the year under review only 10 cases were noted, these were treated with Semprolia, with good effect. In connection with Scabies and infestation in general, the co-operation of school teachers in the discovery of suspicious cases has been very useful.

The following show the figures for treatment and domiciliary visiting etc., for the year under review under the provisions of the Scabies Order, 1941.

Number of patients attended for treatment ...	422
Number of treatments given	1,534
Number of patients cleared and discharged ...	387
Number of domiciliary visits made	251
Number of treatments in the home	10
Number of cases of impetigo	84
Number of cases of infestation of heads	10

LEGISLATION IN FORCE.

The following Adoptive Acts and Bye-Laws are in force in the district:—

The Public Health Act, 1936, came into operation on July 31st of that year and consolidates to a considerable extent much of the previous Public Health Legislation.

Bye-Laws as to Cleansing, Nuisances, Common Lodging Houses, Tents, Vans and Sheds, Slaughter Houses, Offensive Trades, Public Bathing and New Streets and Buildings, were sanctioned by the Ministry of Health, 12th February, 1923. Public Health Act, 1925, Parts II, III, IV and V adopted 15th March, 1926.

The Public Health (Smoke Abatement) Act, 1933; the Slaughter of Animals Act, 1933, and the Housing Act, 1935 and 1936, also the Housing (Prevention and Abatment of Overcrowding) Act, 1935.

The Public Health Act, 1936, came into operation July, 1936. The Factory and Workshops Act, 1937, and the Food and Drugs Act, 1938, which came into operation on the 1st October, 1939.

The Puerperal Pyrexia Regulations, 1939, came into operation 1st April, 1939, and the Measles and Whooping Cough Regulations 1939, came into operation on October 23rd, 1939, Public Health (Tuberculosis) Regulations, 1940. The Scabies Order, 1941, date 28th October, 1941. Public Health (Tuberculosis) Regulations, 1942, being Provisional Regulations, dated May 19th, 1942, relating to the supply of information to the Ministry of Labour and National Service with regard to the Tuberculous history of women called before medical boards for enlistment in the Women's Auxiliary Forces, and is on similar lines to the Public Health (Tuberculosis) Regulations, 1940, with regard to males.

GENERAL PROVISION OF HEALTH SERVICES FOR THE AREA.

Hospitals provided or subsidised by the Sanitary Authority, or by the County Council:—

(a) **Fever.**—The District is included for the purpose of Isolation Hospital accommodation in that under the Chester-le-Street Joint Hospital Board.

(b) **Smallpox.**—Provision is now made at the Shincliffe Smallpox Hospital. It is pleasing to note that there have been no cases of Smallpox in your area for a number of years.

(c) **Tuberculosis.**—Accommodation for men, women and also children suffering from Tuberculosis is provided by Hospitals and Sanatoria outside the area under the Durham County Council's Tuberculosis Scheme. In some instances, surgical patients receive treatment in the neighbouring Hospitals and Institutions.

The local Dispensary for Tuberculosis in the Urban Area is situate in Ropery Lane, Chester-le-Street.

(d) **Typhoid and Paratyphoid.**—This area was fortunate during the year under review, in that it escaped any large amount of sickness caused by infected foods. No cases of typhoid and paratyphoid fever occurred during 1945. From time to time an increased incidence of Diarrhoea and sickness has been noted with symptoms of short duration, but bacteriological investigations have not revealed any definite casual organism responsible, the possibility of this being due to a virus must be considered.

Particular stress should be laid on scrupulous cleanliness in the handling of foodstuffs and for households a suitable covering for foodstuffs, particularly milk is advised, especially in warm weather to obviate the risk of infection caused by flies.

(e) **Children.**—Accommodation and treatment for sick children is provided by the Hospital for Sick Children, Newcastle upon Tyne, and the Children's Hospital, Gateshead, which also admits many cases of general illnesses among children from this area.

(f) **Orthopaedic.**—Although there is no special provision in the Urban District, for this purpose, facilities are provided by the Hospitals above mentioned. The Royal Victoria Infirmary, Newcastle upon Tyne, is also available for the treatment of patients as and when required.

(g) **Throat, Nose and Ear.**—Treatment for diseases of the ear, nose and throat is afforded by the Newcastle Royal Infirmary and the Throat, Nose and Ear Infirmary, Rye Hill in the same city. There is also a special department for diseases of the eye available in the former hospital.

(h) **Eye.**—There is a special department at the Royal Victoria Infirmary, Newcastle, for the treatment of diseases of the eye.

(i) **Maternity.**—In this connection two hospitals are normally provided by the Durham County Council, one at Bishop Auckland and the other at Blackhill, but at the time of making this report it is ascertained that one of these, (Blackhill) has been closed from lack of staff. Patients pay part of the cost of their maintenance according to their financial circumstances. The Princess Mary Maternity Hospital at Newcastle upon Tyne accepts both paying and non-paying patients.

(j) **Maternal Mortality, Etc.**—The following facilities are afforded by the Durham County Council Authority to Medical Practitioners in cases of Puerperal Pyrexia and Puerperal Sepsis, and the Practitioners of the area have from time to time availed themselves of this service.

(1) To have a second opinion on the case;

(2) To have a bacteriological examination of the (a) lochia; (b) blood;

(3) That the patient may be admitted to hospital,

(4) That a trained nurse be provided.

The Puerperal Pyrexia Regulations, 1939, came into operation on the 1st of April, 1939.

Health Visitors' Reports.—During the year under review 40 reports were received by the department from the County Health Visitors, chiefly relating to cases of Tuberculosis, but also referring in some instances to sanitary defects, overcrowding, change of address, and the dsinfection of infected premises, and have proved of assistance to the Health Department.

WARTIME NURSERIES.

At the time of making this report the two wartime nurseries in Chester-le-Street have now been developed into nursery schools under the jurisdiction of the Durham County Council.

INSTITUTIONAL PROVISION FOR UNMARRIED MOTHERS, ILLEGITIMATE INFANTS AND HOMELESS CHILDREN.

No special Institutions exist for these cases, but, at present the Chester-le-Street Board of Guardians admits them to its Institution Hospital and Cottage Homes, Chester-le-Street, and the older children are accommodated at the Cottage Homes, Medomsley.

AMBULANCE FACILITIES.

(a) For cases of Infectious Disease the Chester-le-Street Joint Hospital Board maintains motor ambulances.

Cases of Puerperal Pyrexia, which have to be removed to Princess Mary Maternity Hospital, Newcastle-on-Tyne, under the Durham County Council Scheme, are removed by arrangement between the Urban District Council and a private ambulance service. Chester-le-Street Isolation Hospital also undertakes treatment of such cases.

(b) Non-infectious and accident cases are dealt with by the motor ambulance provided by the Chester-le-Street and District Ambulance Committee.

CLINICS AND TREATMENT CENTRES.

PROVIDED BY THE COUNTY COUNCIL.

Maternity and Child Welfare Centre.	Welfare Centre, West Lane, Chester-le-Street.	Monday & Friday afternoon 1.30 p.m.—4.0 p.m. Sunlight; Tuesday, 9.0 a.m. — 4.0 p.m., ante-natal; Wed., 9.0 a.m.—12 noon, Babies; Thurs., 9.0 a.m. — 12 noon, new ante-natal; 1.30 p.m. — 4.0 p.m., post-natal.
School, Dental, Eye & General Clinic.	Hexham Villa, Birtley.	By Appointment.
Tuberculosis Dispensary.	Ropery Lane, Chester-le-Street	Monday 9.30 a.m. for men. Thursday, 9.30 a.m., for Women and Children.
Venereal Disease Joint Committee's Clinic	Newcastle General Hospital, Westgate Road, Newcastle-on-Tyne.	2 Clinics, one male and one female. Monday—Friday 10.0 a.m.—12 noon 3.0 p.m—7.0 p.m. Saturday 11.0 a.m.—12 noon 4.30 p.m.—6.30 p.m.

VENEREAL DISEASES.

The prevalent opinion in this country is that the best results with regard to these diseases are likely to be obtained by the encouragement, especially of young adults, to lead clean and healthy lives and in the provision of sufficient number of centres for expert diagnosis and early treatment.

Opinion in this country still appears to be against compulsory treatment the conclusion being reached that the degree of success attained in the reduction of the incidence of Venereal Diseases are broadly similar in this country to those in which compulsory treatment has been adopted.

In Penicillin we now appear to have a powerful weapon in our campaign against these diseases.

A considerable amount of Publicity and Propaganda has been carried out in the area from time to time with regard to Venereal Diseases and there is much to be said for definite courses of sex education in the schools although a definite assessment of the full results of this are not as yet available.

SANITARY CIRCUMSTANCES OF THE AREA.

Water Supply.

The National Survey of the water supplies of the Country has resulted in remarkable strides being made in new legislation calculated to increase in volume and purity, drinking water available for both industrial and rural areas.

It will be recognised with considerable satisfaction, that the Rural Water Supplies Act, 1944, and the Water Act, 1945, are directed to large-scale reconstruction, and must ultimately mean the elimination of those perplexing anomalies, which have hitherto caused so much concern among local authorites, both large and small, and should solve many of the problems which for so many years have been instrumental in preventing the provision of a plentious and regular water supply, essential to the well-being of all communities irrespective of financial background or geographical situation.

Of eight samples of drinking water taken from dwelling houses, Day Nurseries, Youth Hostels and the local British Restuarant, and submitted for bacteriological examination at the Public Health Department, Kings College, Newcastle-on-Tyne, it affords satisfaction to report that all were reported as " Bacteriologically satisfactory." It is also reported as of outstanding significance that no cases of water borne disease have been reported in this Urban District during the year 1945.

It has been reported, that in the County of Durham there are 20 parishes without a piped water supply, and that there are well over 400 farms or holdings without an adequate water supply. In the Annual Report for 1944, a brief survey was given of water supply in this Urban area, and it was then indicated that all the farms and other premises in this area have been provided with a piped supply.

The Water Act of 1945 referred to above came into operation on the first of October, 1945, and puts on the Minister of Health for the first time, the duty " to promote the conservation and proper use of water resources and the provision of water supplies in England and Wales and to secure the effective execution by water undertakers, under his control and direction, of a national policy relating to water."

In the paper submitted at the Sessional Meeting of the Royal Sanitary Institiute at Sunderland on June 30th, 1945, Alfred B. E. Blackburn, Esq., B.Sc., M.Inst.C.E., F.G.S., Director of the Sunderland and South Shields Water Company stated " The 1945 Water Act, with its various parts dealing wih Control and

Local Planning, Local Organisation of Water Supplies, Conservation and Protection of Water Resources, and the Powers and Duties of Local Authorities and Water Undertakers, together with the five schedules attached to the Act, constitutes a stage of transcending importance in the history of British Water Supply.

" The Act brings into one great charter the results of the experience of a century on water matters, and the Third Schedule of the Act provides a modern waterworks code, any of the provisions of which may be applied at any time, with or without modification by Order by the Minister of Health, to any statutory undertaking supplying water under a local enactment at the end of five years or at any time previously on the application of the undertakers concerned. The measure of success to be obtained as a result of this Act will depend almost entirely on the spirit which its provisions are applied by the Ministry and on the closeness of the co-operation between the Ministry and the various water undertakers and local authorities."

This quotation from Mr, Blackburn's expert paper is regarded as an interesting and reliable summary of the Water Act, 1945, and it is indeed rare that complex legal language is translated into such simple terms.

Under the heading PRESERVATION OF PURITY, J. Arthur Rodwell, Esq., M. Inst. C. E., M. Inst. M. & Cy. E., F.R.Met.Soc., in his paper given at the same Sessional Meeting said, "The principal object, of course, of those who are entrusted with the maintenance of the undertaking, is to supply water of the highest degree of purity and free from the pollution of animals and human beings, and towards this end, farms within the catchment areas of the reservoirs are, as far as possible thrown out of use and wide stretches of land allowed to lie almost derelict, or used for sheep-grazing only.

" Great care has been taken, too, in the impounding of these waters, as owing to the nature of the ground from which the water is gathered and the ' flashy ' nature of the streams, the water, during times of heavy rainfall and consequent flood, contains a considerable amount of matter in suspension and is subject to discolouration which is difficult to eliminate.

" During such times of flood, much valuable water is lost owing to the necessity of having to divert considerable quantities of debris-laden and discoloured water away from the reservoirs, and back into the stream at a lower point in its course. This frequently occurs even during the summer months when, owing to the depleted state of the reservoirs, the need for conserving water is greatest . . . . As a means of counteracting this, afforestation is being developed on the Burnhope and other gathering grounds, and this it is intended will have the further beneficial effect of helping to neutralise any loss of revenue which might occur, due to de-tenanting of the lands, as well as serving to enhance in a number of ways the water-bearing properties of the lands so utilised. . . . Forest soil is not subject to such large changes of temperature as is open ground. It necessarily follows that large masses of trees, besides affording a means of clarification and conservation, tend to equalise the temperature of the water collected in them, and it has been found in a long series of experiments, that woods generally have a lowering influence on the mean annual temperature of water running off afforested areas is slightly raised in winter, but markedly lowered in summer. This is looked upon as of considerable hygienic importance where water for domestic purposes is concerned, whilst bacteriologists assert that forests exercise a purifying influence on both the air and the soil, germs of all kinds being scarcer in a well-wooded district than in a region where trees are few in number.''

These expert papers have been quoted at some length, because of the opinions submitted on water supplies as affected by recent changes in legislature and with regard to the conditions prevailing in this County in particular. There is also one useful fact which may be recorded with regard to the discolouration of water seen from time to time after heavy rain, this water although unpleasant in appearance is not to be regarded as unfit for human consumption. The value of afforestation is regarded as unique, and this aspect of water engineering is of deep interest. Particularly is this so, when such factors as the future expansion of towns in the vicinity of catchment areas are taken into consideration.

Rivers and Streams.

The silting of the Burn due in a large measure to the impeding of the flow by the dams in the bed of the stream has again been a matter of some concern. These dams, were, of course, placed in the Burn by the N.F.S. as a part of the war-time emergency supplies of water for fire fighting. It is understood that arrangements have been made to have the obstructions removed. The effluent discharging into the River from the Sewage Disposal Works has been of a high standard of purity, and no complaints have been received from the River Commissioners. Local industrial pollution has been considerably reduced in 1945, there being oil and tar waste noted only on 3 days as a result of over 200 inspections, as compared with pollution noted on 19 days after 280 inspections in 1944. Semi-crude sewage—evidently from some distant community—was noted on 5 occasions.

The continued extension of modern drainage, and past Slum Clearance activities have, in a considerable measure, been responsible for definite improvements in recent years. When circumstances are more normal, the possibility of the lengthening of the concrete inverts in the Burn should receive careful investigation.

DRAINAGE AND SEWAGE.

Hermitage Rehabilitation Centre.

Reference was made in the Annual Report for 1944, to the plans approved by the Miners Commissioners for the provision and extension of a drain from the above-mentioned Centre to connect with the Council's sewer network adjacent to the Hermitage Gates.

This connection has not yet been made and the effluent from the Hermitage is still being discharged into the Dene Burn. This method of disposal is not satisfactory and it is hoped that the connection to the Council's sewer network may soon be accomplished.

Chester-le-Street.

The Chester-le-Street Sewage Disposal Plant, although very near to a residential area, has not been the cause of any adverse complaint during the year 1945. The septic or sedimentation tanks are frequently cleansed, and no doubt, chlorination is frequently responsible for destroying much obnoxious effluvia. After treatment, the sludge is pumped on to land the East side of the river Wear and there ploughed into the land. The environment of the Sewage Disposal Plant has been developed with park-like effect and with pleasant results. In 1945, further crops have been cultivated on the land adjoining the sewage beds, and the yield has been very satisfactory. Many classes of student nurses from hospitals covering a wide area have visited this disposal plant for instructional purposes, and expressions of thanks are frequently forthcoming to the Council for the experience and knowledge derived as a result of these visits.

Pelton Fell and Newfield.

Pelton Fell and Newfield are served by the main trunk sewer which has an outfall at the Chester-le-Street Sewage Disposal Works. This part of the district stands on elevated ground which provides a good gradient and thus making pumping unnecessary. Any further housing developments may readily be accommodated by this sewer. Slum Clearance has done much to remove obsolete drainage from this part of the area, and mining subsidence so far, has not interfered with the main trunk sewer referred to in this paragraph.

Chester Moor.

The conditions prevailing at Chester Moor have long been considered by the Council as altogether unsatisfactory, but the Council and its Officers are now considering the early possibility of discontinuing the doubtful methods of sewage treatment at these disposal works.

As already mentioned in previous annual reports, a scheme for abandoning the Chester Moor disposal plant, and connecting Chester Moor by a new trunk sewer to the Chester-le-Street out-fall works are still being regarded as favourable solutions to these problems.

The danger of cattle drinking from the sewage-polluted water in the Chester Moor Dene burn must again be recorded, the matter having been mentioned in previous annual reports. It is also considered desirable to again refer to the obstruction in the flow of the Chester Moor West Burn by trunks and branches of trees as a result of war-time tree-felling and forestry operations.

Sewage Sludge in Agriculture.

The Agricultural Research Council has sponsored a great deal of experimental work on the value of different types of sludges, and very careful field experiments have been made at several experimental stations. Observed trials have also been made in many parts of the country by farmers and sewage works managers.

There has been controversy in some quarters concerning the advisability of using treated sewage sludge for food-crop production, and the conclusions arrived at, and the considered opinions of the following experts are worthy of mention.

In their papers " Effect of Drying and Digestions of Sewage Sludge on Certain Pathogenic Organisms " submitted to the meeting of the Metropolitan and Southern Branch of the Institute of Sewage Purification, Messrs. E. J. Stokes, M.B., M.R.C.P., E. E. Jones, M.Sc., A.R.I.C., and A. A. Miles, M.A., F.R.C.P., M.R.C.S., made some interesting references under the heading *" Examination of Sludges from Sewage Disposal Works."*

" In the experiments which have been described very large inocula of pathogenic bacteria were added to the sludges before drying or digestion. So heavy a degree of contamination would be most unlikely to occur at a sewage disposal works. An examination was made of a number of partially dried sludges in the form in which they would be used as manure from sewage works in different parts of the country.

" So far as is known, there is no record either in this country or in America of an outbreak of serious intestinal infestion which could be attributed definitelv to the handling of sewage sludge or from the consumption of crops grown on land fertilized by sludge. Although the present work has shown that pathogenic bacteria initially present in extremely large numbers do survive both the drying and the digestion, the risk of such bacteria surviving in sludge from sewage containing comparatively small numbers of the bacteria would seem to be small. *Nevertheless, it is a sound precaution to avoid using sewage sludge on salad and other crops which are to be eaten raw."*

These experiments are constantly being carried out, but in the meantime the conclusions already arrived at by the foregoing experts are of the greatest value.

Ashpits and Privies.

In these days of advanced environmental hygiene, it is disappointing to have to report that there are still approximately 813 ashpits and privies in the Urban area. In view of the fact that we possess a modern sewage disposal plant it is regrettable that these antiquated conveniences are allowed to continue in existence. It must be remembered, however, that the war, and subsequent dearth in all essential materials are chiefly responsible for these conditions. There were seven ashpit privies converted into the water carriage system in 1945, and although slow, progress is still being made in the elimination of these undesirable closets.

Eradication of Bed Bugs.

The advent of D.D.T. introduces an era of immense possiblilites in the work of maintaining premises free from vermin, but a local disinfecting apparatus is still regarded as an important adjunct to these activities.

As required by the Ministry of Health, the following are the tabulated particulars of the action taken for the eradication of bed bugs in 1945 :—

(1) Number of Council house found to be infested, 9; disinfested, 9; other houses found to be infested, 6; disinfested, 6.

(2) Methods employed for freeing infested houses from bed bugs and the name of the fumigant and/or insecticide used—General cleansing and the use of D.D.T. solutions.

(3) The methods employed for ensuring that the belongings of tenants are free from vermin before removal. Spraying with one of the above-named preparations.

(4) Whether the work is carried out by the Local Authority or by a contractor—By Local Authority.

(5) The measures taken by way of supervision or education of tenants to prevent infestation or reinfestation after cleansing—Home visits and advice.

(6) Stripping of picture rails, skirting boards and door architraves, etc., and treating all resultant sites and chases with the blow-lamp and chemicals mentioned above.

There is a tendency to conceal infestation, and as bed bugs are nocturnal in habit, it is difficult to detect these pests during the hours of daylight. Occupiers of verminous premises should notify the appropriate officers, and not wait for detection.

Schools.

The Education facilities are of an exceptional character, and many of the schools are pleasantly situated. It appears, however, that a new school should be provided at South Pelaw, which is in an elevated part of the town, and is considered as an ideal site for such a building. Under the present circumstances, even small infants have no alternative but to travel to Chester-le-Street.

The following mentioned schools are situated in the Urban area with the exception of Waldridge Lane and Pelton Roseberry Schools, to which, however, Chester-le-Street Urban children have access.

Council Senior, Junior and Mixed in Church Chare.
Church School in Church Chare.
Victoria Church of England School in Co-operative Street.
R.C. School in Ropery Lane.
Burns School, South Burns (Not in use as a school).
Red Rose Council School at the South end of the Town.
Secondary Schools in Deanery grounds at the rear of the Parish Church.

The Intermediate Schools in Bullion Lane.
Chester Moor children attend the Waldridge Lane School in the Rural area.

Pelton Fell and Newfield children attend Pelton Roseberry School in the Rural area.

It should be mentioned that the Burns Infants' School is considered obsolete and has not been used as a school for some years. It is believed that this School is now used as a Youth Club and " Cubs " meeting place.

Salvage.

Salvage, which was an undeveloped branch of public cleansing previous to the war, has become a highly technical part of municipal cleansing operations. In many instances it has become a very remunerative source of income to the council treasury. In his Presidential address to the Institute of Public Cleansing, J. D. Dawes, O.B.E., M.I.Mech.E., made a contribution which may well prove of the highest value in the guidance of all connected with this work. He stated—inter alia:—

" Sound schemes for the separate collection of waste paper from dwelling-houses are not as simple to organise as might appear; each must differ in degree with local circumstances and conditions. Generally, I think the solution of the problem in many districts, at least, would be to develop the use of trailers which gave such good results during the war. It must be recognised that while the merchant trade can, and I hope, will again undertake the collection of domestic bones and rags, both of which are important raw materials in short supply, only a local authority can collect waste paper house to house at a reasonable cost, the reason being that they can collect it at the same time as they collect refuse from the same houses. With properly designed trailers the two jobs can be done at the same time, but there might be other methods of equal merit.''

Two more important lessons of the war, especially for cleansing officers, were (1) the proved value of kitchen waste as a feeding stuff for pigs and poultry; and (2) its danger as a proved carrier of foot-and-mouth disease. The organised separate collections by local authorities which were commenced as a wartime duty to provide a substitute feeding stuff for cereals from overseas, no longer obtainable, became the irreplaceable sources of supply upon which a very considerable part of the pig population was maintained.

As you know, the Minister of Agriculture has, personally, thanked the local authorities for their outstandingly good work in providing huge quantities of this feeding stuff when it was most wanted. This much must be said for the communal bin with all its drawbacks; it saved the situation for the time being. Now, we must enquire, what of the future? Did the war teach us anything of real value? I think it did; as a matter of fact it taught us much. First, we discovered that housewives preferred to get rid of this fermentable refuse as quickly as possible and, secondly, that they were willing to go to some trouble and distance to do so. Some were more enthusiastic than others; much depended on the site of the nearest bin.

Kitchen waste is the only material with three distinct potentials; it has a definite feeding value; possesses capabilities for nuisance or annoyance, and may act as a carrier of animal disease.''

Salvage collection was continued in 1945, and over 88 tons was collected. The following are the figures for 1945 :—

	Tons.	Cwts.	Qrs.
January	—	5	—
February	11	10	—
March	1	—	—
April	9	18	—
May	7	17	—
June	1	2	2
July	9	5	3
August	—	2	—
September	10	11	—
October	14	1	—
November	11	17	—
December	11	3	—

In view of the limited facilities, including labour this result is considered excellent. Although chiefly concerned with the public health aspect, it is also very satisfactory to note that the substantial income of £507/13/9 was forthcoming as a result of these salvage operations.

Rag Flock Acts, 1911-1923.—There are no premises in the Urban District in which Rag Flock is manufactured or sold.

Scavenging and Refuse Disposal.

The general methods and other arrangements for scavenging and refuse disposal in the area remain the same as reported in the previous year. There are three metal covered motor vehicles and one of the open type. Two horse drawn carts are still in use. Refuse collection was carried out in 1945 with the minimum of delay or complaint, but the need for a refuse destructor must be repeated, as the disposal of household refuse on open ground is a doubtful method of refuse disposal. Small particles of food among the refuse will attract rats and the whole system is contrary to the modern conception of household refuse destruction.

Rodent Control.

After three years intensive efforts, it has not been established that there are any serious major infestations of rats in the Urban District. The Infestation Order, 1943, S.R. & O. No. 680 continues to operate locally, and a considerable number of business, factory and other premises have been baited on the approved lines and cleared of rats during the period under report. Sewage beds and household refuse disposal tips also continue to receive special attention.

SUMMARY OF PUBLIC HEALTH WORK DONE IN THE SANITARY INSPECTOR'S DEPARTMENT DURING THE YEAR 1945.

1.—Public Health Acts.	Number of Informal written Notices by Inspector,	Number of Formal Notices by order of Authority.	Number of Nuisances abated after Notice.
Dwelling Houses and Schools			
Foul Conditions	—	—	—
Structural Defects	30	9	26
Overcrowding	—	—	—
Lodging-houses	—	—	—
Dairies and Milkshops	—	—	—
Cowsheds	—	—	—
Bakehouses	—	—	—
Slaughter-houses	—	—	—
Ashpits and Privies	22	2	26
Deposits of Refuse and Manure ...	—	—	—
Waterclosets	23	—	23
Defective Yard Paving	1	—	1
House Drainage—	11	—	11
Defective Traps	—	—	—
No Disconnection from Sewers	29	—	29
Other Faults	10	—	10
Water Supply	—	—	—
Pigsties	—	—	—
Animals Improperly Kept ...	2	—	2
Offensive Trades	—	—	—
Smoke Nuisances	—	—	—
Other Nuisances	1	—	1
Totals	130	11	126

2.—Water, Food and Drugs.

Samples of Water taken for Analysis	8
Samples condemned as unfit for use	—
Seizures of Unwholesome Food	—
Convictions for exposing or selling Unwholesome Food	—
Samples of Food and Drugs taken for Analysis ...	12
Samples found Adulterated	—

3.—PRECAUTIONS AGAINST INFECTIOUS DISEASE.

Lots of Infectious Bedding stoved or destroyed ...	24
Houses disinfected after Infectious Disease ...	52
Schools disinfected after Infectious disease ...	—
Prosecutions for exposures of infected persons or things	—
Convictions for exposures of infected persons or things	—

4.—GENERAL.

Number of New Houses erected during year ...	—
Number of such Houses occupied during year ...	—
Ashpit-privies converted into Ash-closets	—
Ashpit-privies converted into Water-closets ...	—
Ash-closets converted into Water-closets	7
Total number of Water-closets in District	4,788
Total number of Ash-closets in District	796
Total number of Ashpit-privies in District	17

FACTORIES, WORKSHOPS AND WORKPLACES, 1945.

Premises.	Inspections.	Written Notices.	Occupiers prosecuted.
Factories with mechanical power ...	140	3	—
Factories without mechanical power	60	—	—
Other Premises under the Act (including works of building and engineering construction but not including outworkers' premises) ...	30	—	—
Total	230	3	—

PREMISES AND OCCUPATIONS WHICH CAN BE CONTROLLED BY BYE-LAWS AND REGULATIONS.

Bye-Laws and Regulations in operation for the controlling of common lodging houses, tents, vans, sheds, factories, workshops (including bakehouses), and the following offensive trades: Blood-boiler, bone boiler, fell monger, tanner, leather-dresser, soap-boiler, tallow melter, fat-extractor, tripe-boiler, glue-maker, gut-scraper, and rag-and-bone dealers.

The new Chester-le-Street Urban District Building Bye-laws came into operation in 1939. The regulations etc., controlling Fish Frying require revision under the Public Health Act, 1936.

CAMPING SITES, 1945.

Number of sites which were used for camping purposes during 1945:—2.

Number of camping sites in respect of which licences have been issued by the local authority under Section 26 of the Public Health Act. 1936:—Nil.

Estimated maximum number of campers resident in the area at one time during the summer season, 1945:—10.

Considerable trouble was caused by two families of the gypsy-hawker type during the greater part of 1945. These families, which included several children were encamped on various situations adjacent to the sewage disposal works and on the green north of the Burn stream. They were visited by the Sanitary Officers on several occasions and were truculent in their attitude. They have now left the district.

DISPOSAL OF THE DEAD.

The temporary war-time mortuary in Bland's Opening has now been dismantled and abandoned. The public mortuary stands in the Cemetery grounds, Ropery Lane, and is accessible both from Ropery Lane and Lancaster Terrace. Cremation appears to be an increasing tendency, and in the light of modern public health standards cremation is considered desirable.

HOUSING.

1. Inspection of Dwelling-houses during the Year:	1945
(1) (a) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	230
(b) Number of inspections made for the purpose	300
(2) (a) Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidation Regulations, 1925 ...	142
(b) Number of inspections made for the purpose	250
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	Nil
(4) Number of dwelling-houses (exclusive of these referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	30
2. Remedy of Defects during the Year without Service of Formal Notices:—	
Number of defective dwelling-houses rendered fit in consequence of formal action by the Local Authority or their Officers	26
3. Action under Statutory Powers during the Year:	
A.—Proceedings under sections 9, 10 and 16 of the Housing Act, 1936:—	
(1) Number of dwelling-houses in respect of which notices were served requiring repairs	9
(2) Number of dwelling-houses which were rendered fit after serving of formal notices—	
(a) By owners	9
(b) By local authority in default of owners	Nil
B.—Proceedings under PUBLIC HEALTH ACTS:—	
(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	22
(2) Number of dwelling-houses in which defects were remedied after serving of formal notices	
(a) By owners	20
(b) By local authority in default of owners	Nil

	Year 1945
C.—Proceedings under sections 11 and 13 of the Housing Act, 1936:—	
(1) Number of dwelling-houses in respect of which Demolition Orders were made ...	Nil
(2) Number of dwelling-houses demolished in respect of pursuance of Demolition Orders...	Nil
D.—Proceedings under section 12 of the Housing Act, 1936:—	
(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made	Nil
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit	1

Note.—The following particulars are based on the figures so far available, and must be at present regarded as approximate.

4. Housing Act, 1936.—Part IV.—Overcrowding:	
(1) (a) Number of dwellings overcrowded at the end of the year (ESTIMATED)	420
(b) Number of families dwelling therein ...	500
(c) Number of persons dwelling therein ...	845
(2) Number of new cases of overcrowding reported during the year	2
(3) (a) Number of cases of overcrowding relieved during the year...	Nil
(b) Number of persons concerned in such cases	Nil
(4) Particulars of any cases in which dwelling-houses have again become overcrowded after the Local Authority have taken steps for the abatement of overcrowding	Nil
(5) Any other particulars with respect to overcrowding conditions upon which the Medical Officer of Health may consider it desirable to Report.	

OVERCROWDING.

Unfortunately, it is not possible to report any definite improvement in the overcrowding situation during the year under review, the numbers involved remaining more-or-less static. Some relief of a temporary character was recorded when a number of evacuees returned to their homes in the south about May, 1945. There have been no cases reported of families occupying cellar dwellings or different families using the same bedroom, and no cases of infectious disease have been directly attributable to overcrowding. The real solution of the problem is, of course, the provision of houses to accommodate the families concerned.

HOUSING.

The housing of the people continues to be an acute national and local problem which is no less manifest in Chester-le-Street than in other parts of the country. Shortage of labour and materials are two of the predominent factors which tend to delay local progress. Wartime restrictions, and the stupendous task of readjusting the industry of the nation from that of war to a peace-time basis will not be surmounted with the speed and expediency which is the aim of all concerned. Never-the-less, things are beginning to take shape, and the evidence of certain indications of transition are already to be observed, although slow are plainly discernible. It is expected that work will soon commence on a number of prefabricated houses, (At the time of the completion of this report work has already commenced).

In the Memoranda Submitted to the Sub-Committee of the Central Housing Advisory Committee appointed by the Ministry of Health it was agreed that it " would be well for the Ministry to Revise and Re-issue the Definition of a Fit House given in the Manual of Unfit Houses of 1919," and it was suggested that the new definition should be:—" (1) Of good design; well planned internally and in relation to the adjoining buildings; and provided with all available public services." Numerous recommendations are also made with regard to the general structure of a dwelling-house. Unusual though it may appear, it would be difficult to find a subject which has caused more controversy in the technical and legal spheres than the definition of a fit house. When such a definition (compatible with modern trends) is available to local government officers, they will certainly be armed with a valuable instrument in approaching and adjusting problems of houses in need of structural repairs, and sustaining any attacks from various quarters.

Housing Estates.

Chester-le-Street Urban District have four splendid housing estates as follows:—

(1) Chester-le-Street Housing Estate to the west of the town.

(2) Pelton Fell Housing Estate at Whitehill and Newfield.

(3) South Pelaw Housing Estates.

(4) Chester Moor Housing Estate.

Slum Clearance.

Extensive programmes have been carried out and for the purpose of interest and continuity of record, the following are the particulars of previous Slum Clearance Schemes.

Slum Clearance Programme, 1934.	Houses.
South Row, Newfield 1—26	26
William Street, Newfield 1—29	29
North Row, Newfield 27, 28, 29, 30, 31, 32	6
Club Row, Pelton Fell 4, 5, 6, 7, 8, 9, 10, 11, 12	9
Holme's Buildings, Pelton Fell Block Tenements and 2 houses.	
Steele's Yard, Chester-le-Street 23, 24, 28, 29, 30	5

Slum Clearance Programme, 1935.	Houses.
West Terrace, Newfield 1—26	26
Middle Row, Newfield 1—16	16
West Row, Newfield 1—18	18
Old Grange Terrace, Pelton Fell 9—20	12
Pelaw Square, South Pelaw 1—20	20
Hopgarth, Chester-le-Street 18—23. 25, 26	8
Store Opening, Chester-le-Street 8, 9, 10, 11, 16, 17, 12, 14	8
Albert Terrace, Chester-le-Street 1—7	7
Bland's Opening, Chester-le-Street 20, 21a and 21b	3
Edward Square, Chester-le-Street 28a, 28b and 29	3
Mill Houses (Bland's Opening, Chester-le-Street) 7, 8, 10, 11, 12, 13 and 14	7
Low Chare, Chester-le-Street	3
Total	122

Slum Clearance Programme, 1936.

Pelton Fell Area.

	Houses.
Old Grange Terrace Nos. 63—74 inclusive	12
Pit Row (including Middle Pit Row) 1—26	26
Whitehill Terrace Nos. 1—14	14
Double Row Nos. 1—20	20
Wheatley's Buildings	3
Waverley Terrace Nos. 1—6	6
Stella View and Bateman's Cottages	14
Single Row, Newfield, Nos. 1, 2, 3, 4, 17, 18, 19, 20	8
John Street, Nos. 1—26	26
Low Howlett, High Howlett, Teasdales Buildings	20
Club Row, Nos. 1, 2, 3 and 5	4
Lonsdale Street, Newfield	22
Copelands Yard, Nos. 1—5	5
Queens Head Yard, Nos. 1—6	6
Canada 23, 25, 27, 27a, 32a, 32b, 32c, 32d, 35, 36	10

	Houses.
North Burns (including Old Mill Houses) 10, 13a, 13b, 14, 15, 16, 29, 30, 32, 33, 34, 36, 37, 38, 39, 42a, 42b, 42c, 46a, 46b, 47, 48a, 48b, 50a, 50b, 51, 22a, 22b, 20	29
Pelaw Bank Nos. 2, 3 and 4	3
Wilson's Buildings (Bland's Opening) Nos. 14, 15, 16, 17, 18, 19	6
Bland's Opening (including Mission Hall) Nos. 1, 3, 5, 7	4
Edwards Square Nos. 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21	19
Curry's Yard (including Gospel Hall) Nos. 45a, 45b, 46 47, 48, 49a, Middle Chare (Curry's Yard), 33 and 35	9
Nicholson's Buildings, 1, 2, 3 and 4	4
Stoddart's Buildings, 1, 2, 3, 4, 5, 6, 7, 8, 9	9
Burnside Cottages (South Burns) 1, 2, 3	3
Thompson's Square, 20, 22, 24, 26, 28, 30	6
Greenfield's Yard (South Burns) 1a, 1b, 2, 3, 4 and 5	6
South Burns, 18a, 18b, 21 and 23 (House and Shop), 25, 31, 32, 34, 36, 44, 46, 52, 54, 56, 58, 60, 62, 71, 73, 75, 77	21
Furnace Cottages	3
Total	318

Slum Clearance, 1937.

James Street, Newfield	28
Dean Street, Newfield	27
East View, Newfield	11
High Rows, Newfield	17
Poplar Street, Chester Moor	6
Rowe's Buildings, Chester-le-Street	6
Alexandra Place, Chester-le-Street	10
Robson's Cottage and Gut Scrapers	2
Mansell's Cottage, Bland's Opening	1
Cross Row, Pelton Fell	4
Pelton Level Cottages, Pelton Fell	2
Bank Top Cottage, Newfield	1
Total	115

Slum Clearance Scheme, 1938.

1—17, Old High Row, Newfield.
1—11, East View, Newfield.
1—27. Dean Street, Newfield.
Bank Top Cottage, Newfield.
1—4, Cross Row, Newfield.
8—14. James Street, Newfield.
21—28. James Street, Newfield.
Robson's Cottage and Mansell's Cottage, Bland's Opening.

Milk Supply.

There has been some alteration in the number of the Farms in the area during the year 1945. The old Red Rose Farm buildings have been demolished and no milk is now produced at this Farm. There are now only 5 farms in the Urban District, but agriculture is carried out on a much larger scale than the actual number of farms would suggest, there being a considerable acreage of agricultural land in the district which belong to farms situate within the boundaries of other local authorities.

Milk production and distribution is largely directed by the Milk Marketing Board, but it is interesting to note that the Hermitage and Chester Moor Farms produce Accredited Milk, and much Pasteurised milk is also brought into the area by the North West Durham Co-operative Dairy Co. The following are the remaining farms in the Urban District:—

(1) High Flatts Farm.

(2) Chester Moor Farm.

(3) Whitehill Farm.

(4) Dove Cote Farm.

(5) Hermitage (Garden House) Farm.

There are now 21 purveyors of milk registered to sell milk in the Urban Area, and during 1945, there were 8 samples of milk submitted for bacteriological examination for cleanliness. Of these samples, 3 were unsatisfactory, but after advice, the subsequent samples (1946) indicated a very definite improvement.

Complaints concerning the " pool " milk from Northallerton have been less, and the milk from this source has shown tangible betterment since the heat treatment apparatus has been operating.

Meat Inspection.

The Co-operative Society's slaughter house is the slaughtering centre of the Ministry of Food for the animals slaughtered and the meat distributed over a wide area, and cover both the Chester-le-Street Rural and Urban Districts.

Meat Inspection is carried out by the Sanitary Inspectors of the adjacent Rural area and the Sanitary and Housing Inspector for this Urban District. When slaughtering is in full operation, congestion is acute and the careful examination of carcases rendered very difficult.

CARCASES INSPECTED IN 1945.

Steers	Heifers	Cows	Sheep	Calves	Pigs	Bulls
229	182	119	1,780	34	73	9

Diseased and Unsound Meat Destroyed.

Jan.	Feb.	March	April	May	June
130 lbs.	810 lbs.	76 lbs.	1,312 lbs.	543 lbs.	194 lbs.
July	August	Sept.	Oct.	Nov.	Dec.
953 lbs.	76 lbs.	840 lbs.	839 lbs.	780 lbs.	168 lbs.

These figures make a total of 3 tons 7lbs. of meat destroyed during 1945. Some of this meat was disposed of for salvage for manufacturing purposes. The staff of the Ministry of Food are responsible for this work.

Included in the above was the carcases of 8 beasts sent in for slaughter by the Veterinary Inspectors of the Ministry of Agriculture and Fisheries. Tuberculosis in varying degree was confirmed in every instance. Tribute is extended to these Inspectors for the harmony and co-operation which exists between these Officers and the local Inspectors, particularly in view of the trying conditions under which post-mortem examinations of suspected animals are carried out.

Also included in the above figures are 2 sheep which were killed in transit. Apart from parasitic infections of the liver and lungs, disease among sheep is very rare. No Foot-and-mouth disease, Anthrax or Swine Fever was discovered among the cattle slaughtered and inspected.

Food and Drugs Act, 1938. (Other Food Destroyed.)

Articles.	Tins, etc.	Weight in lbs.
Condensed Milk	135	227
Pilchards	117	117
Baked Beans	118	117½
Stewed Steak	94	94
Luncheon Meat	87	208½
Butter	—	232½
Casserole Steak	9	9½
Salmon	18	13½
Sausage	—	72½
Sausage Meat	10	15
Onions	60	60
Jam	29	32
Grapefruit	1	12
Ox Tail Soup	1	½
Beef Extract	—	¼
Prem	14	9¼
Spam	2	1½
Canned Beef	9	54
Chopped Ham	16	16½
Mincer Meat	1	1
Mackerel	3	3
Cooked Peas	24	22½
Sugar	—	29
Lemon Curd	2	2
Dried Eggs	1	½
Crawfish	5	2½
Herrings	8	8½
Marmalade	13	27
Fish Cakes	—	29½
Chilled Beef	—	17
Cheese	—	4
Bacon	—	24
Soup	—	1½
Spam	3	3
Sardines	17	3¾
Carrots	1	½
Pork Loaf	1	2½
Brisket Beef	2	8
Prunes	3	100
Shrimps	5	2½
Kam	3	2¼
Potatoes	—	14
Dates	6	336
Ham	—	12
Syrup	1	2

There has been a considerable reduction in the quantity of foodstuffs condemned as unfit for human consumption in 1945, the amount being 17 cwt. 1 quarter 19½ lb. This decrease is viewed with satisfaction, as the need for the destruction of valuable food is always a matter for grave concern. Some of the condemned foodstuffs, however, were claimed for salvage by the Ministry of Food. These unfit articles of food were used for manufacturing purposes NOT connected with provisions for human consumption. A few more shops have installed refrigerators, and there now appears to be less food damaged in transit. There were no prosecutions for exposing unfit food for sale during the period under review.

Shops.

A considerable number of the 200 shops in the area have remained closed during the year under report. There are approximately 37 shops with rooms above occupied by families. Some of these occupied apartments are not in accordance with modern housing standards. In some districts, a number of vacant shops have been altered into dwelling houses, and if shops are likely to be empty for a long period, these conversion schemes would seem to be desirable in view of the acute housing shortage. A considerable number of inspections of shops were made in 1945, the chief concern being those business premises engaged in the preparation and sale of foodstuffs.

Common Lodging House.

The registered keeper of the only common lodging house in the area being now deceased, there is now some question of the owner closing these premises. The building lacks modern amenities, and as the " casual " is always likely to be in evidence, modern amenities should be available for this section of the community. Modern facilities would have definite educative value, and would be calculated to induce persons of the tramp class to become stable and useful citizens.

The appointed Food Sampling Officers of the Durham County Council are responsible for the Food Sampling within the Urban area. No complaints have been received with regard to any suspected adulteration.

Chemical and Bacteriological Examination of Food.

With the exception of Food Poisoning procedure, King's College (University of Durham) carry out the analysis of milk for advisory purposes; and the examination of food samples is carried out by Durham County Analyst, whose premises are at Darlington.

Shell-fish (Molluscan).

Public Health (Shell-fish) Regulations 1934 and Public Health (Cleansing of Shell-fish) Act, 1932.

There are no shell-fish beds or layings in this district.

Nutrition.

Food supply is the most important of those functions of the State on which nutrition and national health depend. The war-time measures adopted by the Ministry of Food are now being used to make a wise post-war food policy. To enumerate some of these we may mention (a) the control of the distribution of essential foods so that gross nutrition inequalities are redressed, (b) the more equitable distribution of milk, the extended use of dried milk, and now the pasteurization of milk; the provision of milk and other protective substances for expectant and nursing mothers and for infants and young children, the milk-in-school schemes; the provision of school meals, the use of communal restaurants and industrial canteens.

The permanent establishment of an enlightened Ministry of Food together with the continuation or possible extension of measures which were in operation in wartime, the even and rapid distribution of essential foods, the control of food prices, and the close co-operation between the Ministry of Food and those of Education, Agriculture, Health and Transport, would go far to ensure good food for everyone.

It is particularly important to extend the system of school meals so that every child, rich and poor alike, shall receive at least one meal daily replete with all the essential nutrients. These measures together with the multiplication of the communal restaurants and industrial canteens where cheap, well-cooked and well-constituted meals including fresh vegetable salads, aesthetically served, could be provided together with the raising of the art of cooking to the level of a profession and the employment of skilled dieticians in all restaurants, canteens, hospitals, schools and other institutions, would go a long way to raise our national health standards to and maintain them at a satisfactory level.

British Restaurant.

The Central British Restaurant continues to be well patronised, and it is possible that such efforts at communal feeding may be carried into the post-war period.

Prevalence of, and control over Infectious and other Diseases,

Notifiable Disease (other than Tuberculosis) during the year

Disease.	Total Cases Notified.	Cases admitted to Hospital	Total Deaths
Scarlet Fever	20	20	—
Diphtheria	26	26	—
Pneumonia	16	—	9
Ophthalmia Neonatorum	1	—	—
Food Poisoning	1	—	—
Ant. Poliomyelitis ...	1	—	—
Whooping Cough ...	4	—	—
Dysentry	1	—	—
Measles	110	2	—

With regard to food poisoning and dysentery above mentioned, further investigation in hospital did not confirm the original diagnosis.

AGE DISTRIBUTION OF CASES.

Age Group.	Scarlet Fever	Diphtheria	Pneumonia	Ophthalmia Neonatorum	Food Poisoning	Acute Poliomyelitis	Dysentery	Whooping Cough	Measles
Under 1 year	0	0	1	1	0	0	0	2	6
1 year	0	0	0	0	0	1	0	1	12
2 years	1	2	1	0	0	0	0	1	15
3 ,, ...	1	0	1	0	0	0	0	0	16
4 ,, ...	2	1	0	0	0	0	0	0	16
5—9 years	7	8	0	0	0	0	0	0	40
10—14 ,, ...	5	4	0	0	0	0	0	0	3
15—19 ,, ...	2	4	1	0	0	0	0	0	1
20—34 ,, ...	2	5	0	0	1	0	1	0	1
35—44 ,, ...	0	1	0	0	0	0	0	0	0
45—64 ,, ...	0	1	4	0	0	0	0	0	0
65 yrs. & over	0	0	8	0	0	0	0	0	0

MONTHLY INCIDENCE OF CASES.

Disease.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec
Scarlet Fever	2	0	0	1	0	2	2	0	2	8	3	0
Diphtheria	0	0	2	2	1	1	0	2	6	8	3	1
Pneumonia	4	1	2	3	0	3	1	0	0	1	0	1
Food Poisoning	0	0	0	0	0	0	0	0	1	0	0	0
Ophthalmia Neonatorum	0	0	0	0	1	0	0	0	0	0	0	0
Ant. Poliomyelitis	0	0	0	0	0	0	0	0	1	0	0	0
Whooping Cough	1	0	0	0	1	0	0	0	0	1	1	0
Measles	32	39	10	5	8	6	9	0	0	1	0	0
Dysentery	0	0	0	0	1	0	0	0	0	0	0	0

OPHTHALMIA NEONATORUM.

CASES			Vision Un-impaired	Vision Impaired	Blindness (Total)	Deaths
	Treated					
Notified	At Home	in Hospital				
1	1	—	—	—	—	—

TUBERCULOSIS.

(All Forms).

Notifications and Deaths in the Urban Area during the Years: 1941, 1942, 1943, 1944 and 1945.

Year.	Notifications.	Deaths.
1941	20	6
1942	16	5
1943	29	10
1944	23	4
1945	26	9

New Cases of Mortality During the Year 1945.

Age Periods	New Cases.				Deaths.			
	Respiratory		Non-Respiratory		Respiratory		Non-Respiratory	
	M.	F.	M.	F.	M.	F.	M.	F.
Under 1 yr.	...	...	...	...	...	...	...	...
1—5	...	1	2	2	...	...	1	...
5—15	...	...	2	2	...	...	...	...
15—25	3	2	2	2	...	1	...	...
25—35	3	3	...	...	1	1	...	...
35—45	2	...	...	...	1	3	...	...
45—55	...	...	...	...	...	...	...	...
55—65	...	...	...	1	...	...	...	...
65 and over	...	...	...	...	...	...	...	...
Totals	8	6	6	6	2	5	1	...

Since the last report further researches have been going on in an effort to find a drug capable of exerting a bacteriological action against the tubercle bacillus. The high hopes of sufferers from this disease at the prospect of a cure through some drug or serum hailed in the lay press as a panacea, have more often than not to be damped down by the medical adviser, for he well knows that the tubercle bacillus is much less susceptible to attack by antiserum or antiseptic than most other pathogenic bacteria, and that the chronic fibro-caseous nature of the pathological lesions is a great obstacle to the beneficial action of drug and serum. The sulphone promin (promanide in England) has so far been the most promising of the new drugs in experimentally infected animals, but clinical results, with the possible exception of some local tuberculous lesions, have been disappointing, and the drug has at therapeutic level a considerable degree of toxicity.

Penicillin has proved ineffective, but the new antibiotic Streptomycin, has been found expreimentally to be bacteriostatic to the tubercle bacillus in relatively low concentration in the test-tube, and the results of its use in experimental infection, together with a preliminary clinical report, would appear to indicate that this drug has some curative action on progressive tuberculosis.

From the first experimental results of its use reported by Feldman and Hinshaw from the Mayo Clinic, it was shown that the drug in a varying daily dosage (1,750 to 6,000 units) given subcutaneously in four or five divided doses, and continued for a period of 60 days, exerted a striking suppressive effect on the progressive tuberculous infection of guinea-pigs after their injection with a culture of the human bacillus, When it is realised that Streptomycin was used in these experiments at less than 1/20 of its tolerated dose, this new substance has therefore obvious advantages over promin (promanide in England), hitherto regarded as the most promising chemotherapeutic agent in experimental tuberculosis. It is too early to assess these clinical results and for a proper assessment, controlled trials on carefully selected patients, kept under observation for a number of years will be required before any serious judgment of its value can be made. From a preliminary and guarded report by Hinshaw and Feldman, on its use in a small series of patients observed for only a few months, they conclude that the use of Streptomycin in Tuberculosis should meanwhile be limited to the treatment of early and haematogenous forms of pulmonary tuberculosis, tuberculosis of the genito-urinary tract, suppurative lymphandentis, and early miliary tuberculosis; that treatment should be supplementary to other proved measures, and that a cautious attitude should be preserved about Streptomycin in Tuberculosis until the results of fuller studies are available. The greatest use for this new antibiotic—if its early promise is to be sustained—will be in Tuberculosis, and it is hoped that supplies of this drug preferably home-made, for controlled experimental and clinical trials will soon be available in this country.

In 1945 the Death Rate for Tuberculosis was lower than in 1938, but during the same period the number of new cases has indeed increased, showing that perpetual vigilance is still the price of Eventual immunity,—this is due to the war and to increased search.

In this county as seen in the Annual Report of the County Medical Officer of Health for Durham, covering the period 1938-1944, the number of new cases of Tuberculosis in 1944 exceeded that of 1940, which was the lowest recorded figure by 30 per cent. The increase was mainly attributable to the steep rise in the incidence of pulmonary Tuberculosis in females between the ages of 15 and 25 among whom the number of new cases was 130 per cent. higher in 1944 than in 1939. Despite this, however, it is noteworthy that the death rate from Pulmonary Tuberculosis fell to its lowest recorded level in 1944.

In the 86 year period, 1838-1924, the Tuberculosis Mortality in this country declined by 68 per cent. whereas in the period 1924-1946 it has fallen by approximately 46 per cent., i.e. approximately 2 per cent. per annum during this period and double the previous rate. In this latter period local authorities really began to cope with the Tuberculosis problem after the increase in incidence following the last Great War, and their efforts are amply illustrated by the more rapid decrease over the last 22 years. With better facilities for earlier diagnosis at our disposal, by the betterment of our housing conditions and social services in the post-war period, by putting away complacency, and by intensifying and making full use of every means at our disposal, including widespread pasteurization of milk, it is not unreasonable to suppose that the present rates of improvement will not only be maintained, but will be improved upon.

With regard to mass radiography of the chest, the past year has seen further advances in what must be recorded as a period of preparation for an intensive attack on Pulmonary Tuberculosis in the whole population. The difficulties at the present moment of a mass attack, together with the disposal and treatment of the affected, are obvious, but the preliminary results lead one to be hopeful of a great reduction within a lifetime. Mass radiography has now been extended to the civilian population and somewhat over 800,000 people have been examined by this method, 73 per cent. being in the age group 15-45 years. Of every 100 examined it can be estimated that the chests of 95 were normal. In school-leavers it has been found, by means of radiography that 1 in every 1,000 approximately have been found to have active pulmonary disease.

H. J. Trenchard in 250,000 examinations by mass radiography in the R.A.F. found 650 cases of pulmonary Tuberculosis which were judged to be active and in 175 of these, tubercle bacilli was found in the sputum.

With regard to Tuberculosis of the skin—Lupus Vulgaris, dramatic results have been achieved by the oral administration of Vitamin D2 (Calciferol) in doses of 100,000 i.u. daily, and there is no doubt that Calciferol promises to be a great advance in therapy.

From a survey by mass miniature radiography of factory groups in Middlesex (W. P. Dick) it was estimated that there were probably some 3,000 undiagnosed cases of pulmonary tuberculosis in the county in need of treatment, half of which were symptomless. From this survey the value of mass radiography in the discovery of the symptomless and undiagnosed case of Tuberculosis can be appreciated.

Rehabilitation of the Tuberculous

Rehabilitation is now occupying an increasingly important place in the Tuberculosis problem and has been greatly facilitated by the Disabled Person (Employment) Act, 1944, in which the Ministry of Labour may provide vocational training courses and industrial rehabilitation courses for persons who need them. Under this Act employers are obliged to employ a quota of disabled persons of whom a register of such is kept by the Ministry of Labour. In the case of sufferers from Tuberculosis where there may be serious disablement the Ministry may make special facilities presumably by way of village settlements on the lines of Papworth.

Pasteurization of milk

In connection with Tuberculosis it is estimated that the number of deaths through drinking raw milk contaminated with bovine Tuberculosis, are anything up to 2,000 per year and the total number of casualties would be between 7,000 and 8,000. These casualties often require months of treatment in Sanatoria and hospital, a source of misery and anxiety to their families and a source of great expense to the state. The only effective answer to this latter problem is the pasteurization of milk. Investigation has shown that pasteurization, although producing minor changes in the composition of milk, has no appreciable effect on its food value.

According to the National Institute for Research in Dairying, the difference in composition between raw and heat-treated milk had been found to be less than that between samples of raw milk from different herds.

Opponents of pasteurization have said that it destroyed the need for T.T. and attested herd schemes, but these schemes were directed towards improving the health of our cattle as well as towards producing germ-free milk. The heat treatment of milk was directed primarily towards improving the health of our population and reducing the number of deaths and casualties as a result of bovine infection. A great difficulty with regard to progress in pasteurization, has been shortage of plant, but it is to be hoped that this will be overcome when a more active policy can be pursued. Of a total annual liquid milk consumption of 1,075,000,000 gallons in this country, approximately 725,000,000 gallons were heat treated. An efficient system of heat treatment destroyed the germs in the milk without interfering with the food value of the product.

For children under 5 years it had been found by laboratory examination that abdominal Tuberculosis is nearly always of bovine origin and these deaths therefore give the best indication of the prevalence of bovine disease for comparative purposes. The following table sets out the trend of death rates for degree of urbanisation.

Death Rates from Abdominal Tuberculosis per 1,000,000 Children under 5 years of age in each Area.

(Actual Number of Deaths in Parentheses).

	1921	1930	1938	1944
London (administrative county)	136 (51)	24 (8)	12 (3)	6 (1)
County Boroughs ...	437 (490)	157 (166)	63 (57)	35 (32)
Urban Districts ...	366 (390)	134 (139)	77 (66)	42 (42)
Rural Districts ...	252 (176)	92 (57)	63 (31)	60 (37)

The Death Rates have continuously declined in each area, but the figures supplied by the Registrar-General, the first of their kind, show a striking difference between areas. The rate for London in 1944 was only one-tenth of that in rural areas. In 1944 the rate for London was only one-twenty-third and that for rural districts, one-fourth of the 1921 level.

A factor of great importance in this is the pasteurization of milk. Before 1923, no milk was pasteurized under licence, though in London and a few larger towns some milk was "flush-heated," particularly in hot weather to prevent souring. By 1938 over 50 per cent. of the milk consumed in county boroughs was pasteurized and over 98 per cent. in London.

A strong plea is therefore made for immediate legislation insisting on pasteurization of all milk supplies and the speedy organisation of systematic research on a national basis for the prevention and cure of Tuberculosis. It has been estimated on a conservative basis that Tuberculosis costs this country £15,000,000 annually, whereas, it was reported only the other day by one of the greatest authorities in matters of chemotherapy, that if £1,000,000 were spent on research in Tuberculosis, definite results could be produced within 10 years.

At the time of drawing up this report increasing interest is being taken in the use of B.C.G. Vaccine, for purposes of immunisation against Tuberculosis. It is to be hoped that the supply and use of this vaccine in Great Britain will be facilitated and encouraged in view of the results which have been obtained from its use in other countries, particularly Norway and Denmark. Although the use of B.C.G. Vaccine should be encouraged, its employment should not be allowed to discourage the search for a more efficient means.

As illustrating the increasing use of X-Rays taken in the diagnosis of Tuberculosis, I quote the figures of the number of X-Rays taken in connection with the Durham County Council scheme since the outbreak of the war.

1939	1566
1940	1837
1941	2415
1942	2955
1943	4891
1944	6272
1945	5500

As mentioned in my previous report for the year 1944, the scheme of allowances to Tuberculosis (Pulmonary) patients under the Ministry of Health Memorandum 266T, came into force in the Durham County area on August 1st, 1943. As illustrating the number of cases receiving such allowances during the year under review I quote the figures taken from the quarterly returns of the County Medical Officer of Health.

Ministry of Health—Memo. 266T.

The following statement gives particulars of the allowances granted to Tuberculosis patients during the year under review.

Type of Payment.	Last Quarter in 1943	New Cases.	Renewals.	Terminations.	Suspensions.	Year 1945	Amount £	s.	d.
1. Maintenance Allowances	311	345	111	308	127	322	2497	13	3
2. Discretionary Allowances	22	19	...	10	...	31	377	13	9
3. Travelling Expenses	...	35	...	22	...	13	77	3	7
4. Domestic Help	...	1	...	...	...	1	1	0	9
5. Pocket Money	...	7	...	6	...	1	37	0	0

No action was taken under the Public Health (Prevention of Tuberculosis) Regulations, 1925, or under Section 127 of the Public Health Act, 1936, in 1945.

General Observations.

Continued stress should be placed on the importance of environment and methods of the prevention of disease and maintenance of good health, that is to say a positive rather than a negative approach. It is interesting in this connection to note, that since 1871 the general expectation of life has increased by 19 years, but that in every year still, in England and Wales, 100,000 persons die from illness which could be prevented. The major environmental causes of these diseases are poverty, bad housing, malnutrition and ignorance in health matters. Continued efforts should be made to improve the housing and food standards, and to eliminate ignorance by continued health propaganda and encourage medical research in every way.

The present general interest in Penicillin and the vast increase in its production is causing an increasing testimony to its powers and also to its limitations in clinical conditions. On the whole it can be said that Penicillin has accomplished most of what it was legitimate to expect of it. In infections by the most susceptible organisms, i.e. the gonococcus and the meningococcus, the results have been brilliant, and against infections by the pyogenic organisms, the results achieved are better than ever before, nevertheless it has not been proved possible to avoid many of their ill-effects and pus still requires drainage. Many of the results of its use in bone infections and in the treatment of sub-acute bacterial Endocarditis have been disappointing. In the Venereal Diseases, we have for the first time, a drug that appears effective against both gonorrhea and syphilis. If it had accomplished nothing else than a quick and sure cure for gonorrhea, the discovery of Penicillin would still be regarded as a medical milestone and the prospect of eradicating this disease from the country is one that should dazzle and stimulate public health authorities.

Continued efforts in the search for a chemotherapeutic drug against Tuberculosis, and the experimental use of Streptomycin in Tuberculosis will be watched with intense interest since the best hopes of thousands of sufferers from this disease depends on the discovery of such a drug.

Intensification of our efforts in diphtheria immunisation is occurring and it is satisfactory to note that no deaths from diphtheria occurred in this area during the year under review.

Heart disease still occupies a major position in our causes of death for 1945. No serious epidemic of infectious disease occurred during the year. There has been an increase in minor ailments and recovery from these seems to be more retarded than in pre-war times.

Medicine and surgery are now passing through a deeply interesting phase, hastened by war-time experience, the advent, first of the Sulphonamides and more recently of Penicillin, and the hormone treatment of certain cancers such as that of the Prostate, have opened new prospects in almost every department of treatment.

The Public Health Department is extremely grateful to all the general practitioners in the area for their ready co-operation at all times, but particularly with regard to Diphtheria Immunisation and the prevention and control of Scabies in which their co-operation has been invaluable.